



Carpal Tunnel Release

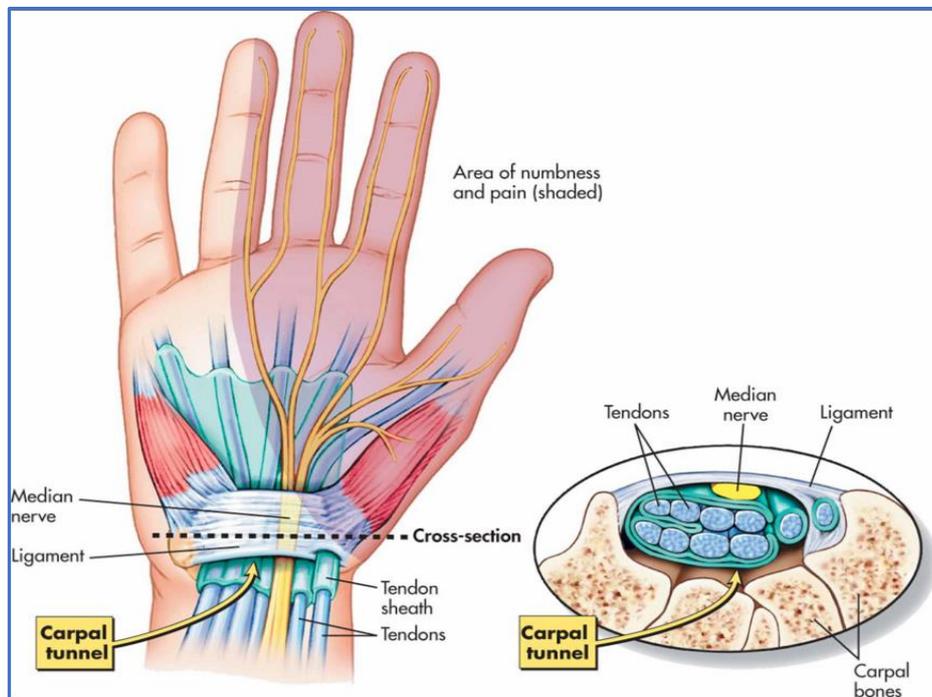
Informed consent: patient information

1. Carpal Tunnel Syndrome

Carpal tunnel syndrome is caused by compression of the **median nerve** when it passes through the wrist. The median nerve carries the sense of touch to the thumb and most of the next 2 fingers, and controls movement for some of the hand muscles.

This nerve runs from the spinal cord down the arm then through **the carpal tunnel**, a narrow passageway in the wrist that is formed by some wrist bones and strong band called transverse carpal ligament with flexor tendons.

Carpal tunnel syndrome occurs when the tunnel becomes narrowed or when tissues surrounding the flexor tendons swell, putting pressure on the median nerve.



The most **common symptoms** of carpal tunnel syndrome include:

- Tingling or numbness in your fingers or the palm of your hand that feels like pins and needles, mainly in **the thumb and index, middle, and ring fingers**
- Nerve pain in your wrist or hand, which can spread up your arm or down to your fingers
- **Weakness and clumsiness** in your hands, making it hard to grip things
- **Dropping things** – due to weakness, numbness, or a loss of proprioception (awareness of where your hand is in space)



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The actual cause is unknown in most people. Women aged 40 to 60, pregnant women, people with arthritis, people who put on weight rapidly and people who use their hands repeatedly in their work are more at risk of developing carpal tunnel syndrome. The condition seems to affect people with certain medical conditions such as diabetes, thyroid conditions, and rheumatoid arthritis more frequently.

Your doctor will ask about your symptoms, then you may have further tests to see how quickly the median nerve passes messages through the carpal tunnel called **nerve conduction studies**. Your doctor may also request blood tests to rule out other associated conditions, such as rheumatoid arthritis, or x-rays, particularly if you have injured or broken your wrist or have bone changes.

Treatment options can include:

- treating a related medical condition that could be causing the symptoms
- wearing a wrist brace (also called a splint) to keep the wrist straight, especially at night
- ice, elevation, massage
- anti-inflammatory medicines to ease pain
- avoiding activities that cause symptoms
- physiotherapy
- corticosteroid injections into the wrist
- surgery

2. What is carpal tunnel release (surgery)?

A carpal tunnel release is a surgical procedure to relieve patient's symptoms by taking away compression of the median nerve at the wrist. During the procedure, your doctor will divide the transverse carpal ligament (the roof of the carpal tunnel). This increases the size of the tunnel and decreases pressure on the median nerve.

The operation is performed as a day only procedure. It is mostly performed under local anaesthesia unless the patient opts for a sedation or general anaesthesia. The procedure usually takes less than 20 minutes.

Through an inch-long skin incision on the palm close to the wrist, the transverse carpal ligament is identified and divided. The median nerve will be free of adhesion and entirely preserved. The wound will be closed with some interrupt nylon sutures and covered with an elastic bandage.

3. How to prepare for the procedure?

If you were to have any sedation or general anaesthesia, you should have nothing at all 6 hours before the surgery. Patients who are on aspirin, clopidogrel or other blood thinners should discuss with Dr Woo to get instruction when and how to cease the medications prior to the surgery.



4. What to expect after the procedure?

You should be able to go home the same day. You may have some numbness or tingling of fingers due to the local anaesthetic injections used to help control post-operative pain (this should wear off within about 24 hours).

You can take some simple analgesia such as 2 tablets of Panadol (1000mg) up to 4 times a day to keep your pain under control. It is important to keep your fingers moving to reduce swelling and prevent stiffness.

You will be encouraged to keep your hand raised above your heart and bandaged for 2 days. After removal of the elastic bandage (by yourself), you should keep the wound dry, preferably covered with a waterproof dressing for a week.

You will be allowed to use your hand for light activities, taking care to avoid significant discomfort. Driving, self-care activities, and gripping is permitted soon after surgery.

The stitches need to be removed in 10-14 days weeks after the surgery and you will visit your GP for removal of the sutures after the review of the wound.

You will be encouraged to return to see Dr Woo about 3-4 weeks after the surgery to ensure that the recovery is proceeding as planned and discuss any concerns.

You should expect some pain, swelling, and stiffness after your procedure. Minor soreness in your palm may last for several weeks. Grip and pinch strength usually return by about 2 to 3 months after surgery. If the condition of your median nerve was poor before surgery, however, grip and pinch strength may not improve for about 6 to 12 months.

Dr Woo will talk with you about when you will be able to return to work and whether you will have any restrictions on your work activities.

5. What are the complications related to the procedure?

General complications of any operation

- pain
- bleeding (bruising or haematoma formation)
- wound infection

Specific complications of this operation

- persistent numbness in your thumb, index, and middle fingers
- damage to the median nerve or its recurrent branch
- pain at the wrist when making a fist or leaning on the wrist
- scar tenderness